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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/647,255
Filing Date: August 26, 2003
Appellant(s): VERGNAUD ET AL.

Diallo T. Crenshaw
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 18, 2011 appealing from the Office action mailed October 18, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-9, 11-15, 17-35, 37-41, 43, and 44 are rejected and pending in the application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds

of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

7,002,980	Brewer et al.	02-2006
2002/0075844	Hagen, W. Alexander	06-2002
2002/0132611	Immonen et al.	9-2002
2002/0178365	Yamaguchi, Shingo	11-2002
2003/0165128	Sisodia et al.	09-2003
2003/0214929	Bichot et al.	11-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9, 11-14, 17, 21-35, 37-40, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen, US Publication No. 2002/0075844 (Hagen hereinafter), in view of Yamaguchi, US Publication No. 2002/0178365 (Yamaguchi hereinafter) and Brewer et al. US Patent No. 7,002,980 (Brewer hereinafter).

As per claim 1, Hagen teaches substantially the invention as claimed including a processing server for allocating to user terminals resources of a local area network, said server connected to at least one local area network access point, said server comprising:

a control module, which:

classifies the terminals into a first group or a second group according to whether or not the terminals establish a "type of" communication with said local area network (Paragraph 0048, 0050. Determine if terminal is registered and authorized, MAC is registered.); and

allocates resources of said local area network to the terminals attempting to establish communication with said local area network as a function of whether the terminals are classified in said first group or said second group (Paragraphs 0050-0051. Allocate resources if terminal is registered/authorized.),

wherein said control module allocates at least two priority levels to the terminals for said allocation of resources of the local area network according to whether the terminals are classified in said first group or said second group (Paragraphs 0050-0051. Allocate assigned QOS level and resources. Paragraphs 0107, 0110. Given priority/level depending on priority, standard, unregistered, etc…)

Hagen teaches of classifying terminals but not specifically according to whether or not the terminals establish an encrypted communication with said local area network. Hagen does not specifically teach of a module that automatically modifies an allocated priority level as a function of the available resources of said local area network.

Yamaguchi teaches of classifying terminals according to whether the terminals establish an encrypted communication with a local area network (Paragraphs 0025, 0039; claim 1. Level of access based on whether communication is encrypted.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to classify terminals according to whether or not the terminals establish an encrypted communication with said local area network. The motivation for the suggested combination is that Yamaguchi's teachings would improve security in Hagen's teachings by controlling a level of access to resources based on security of a connection.

Brewer teaches of a module that automatically modifies an allocated priority level as a function of the available resources of a network (col. 4, lines 17-28. Bandwidth pre-allocated to each QOS level. col. 2, lines 1-12; col. 5, lines 11-17, 63-67. Excess bandwidth added to QOS level.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to automatically modify an allocated priority level as a function of the available resources of said local area network. The motivation for the suggested combination is that Brewer's teachings would improve the suggested system by providing instantaneous management of congestion and improving efficiency by using unused bandwidth.

As per claim 28, Hagen teaches substantially the invention as claimed including a method of allocating resources of a local area network to user terminals via at least one access point to said local area network, said method comprising:

in the case of an attempt at setting up a connection with said local area network by a terminal of said terminals, classifying said terminal in a first group or a second group according to whether or not said terminal establishes a "type of" connection with said local area network (Paragraph 0048, 0050. Determine if terminal is registered and authorized, MAC is registered.); and

allocating resources of said local area network to said terminal as a function of whether said terminal is classified in said first group or said second group (Paragraphs 0050-0051. Allocate resources if terminal is registered/authorized.),

wherein at least two levels of priority for allocation of resources of the local area network are allocated to the terminals according to whether the terminals are classified in said first group or said second group (Paragraphs 0050-0051. Allocate assigned QOS level and resources. Paragraphs 0107, 0110. Given priority/level depending on priority, standard, unregistered, etc…)

Hagen teaches of classifying a terminal but not specifically according to whether or not the terminal establishes an encrypted connection with said local area network. Hagen does not specifically teach wherein an allocated priority level is automatically modified as a function of the available resources of said local area network.

Yamaguchi teaches of classifying terminals according to whether the terminals establish an encrypted connection with a local area network (Paragraphs 0025, 0039; claim 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to classifying the terminal according to whether or not the terminal establish an encrypted connection with said local area network. The motivation for the suggested combination is that Yamaguchi's teachings would improve security in Hagen's teachings by controlling a level of access to resources based on security of the connection.

Brewer teaches of automatically modifies an allocated priority level as a function of the available resources of a network (col. 4, lines 17-28. Bandwidth pre-allocated to each QOS level. col. 2, lines 1-12; col. 5, lines 11-17, 63-67. Excess bandwidth added to QOS level.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to automatically modify an allocated priority level as a function of the available resources of said local area network. The motivation for the suggested combination is that Brewer's

teachings would improve the suggested system by providing instantaneous management of congestion and improving efficiency by using unused bandwidth.

As per claim 2, Hagen, Yamaguchi, and Brewer teach the server according to claim 1. Hagen further teaches wherein said control module determines a MAC address of each of said terminals attempting to establish communication with said local area network (Paragraph 0048. Lookup MAC address.); and said processing server further comprises means for allocating an IP address to each of said terminals attempting to establish communication with said local area network, and having the MAC address determined by said control module (Paragraphs 0052, 0068. Allocate IP address.).

As per claim 3, Hagen, Yamaguchi, and Brewer teach the server according to claim 2. Hagen further teaches wherein said allocation means are of the DHCP type (Paragraph 0052, 0066. DHCP.).

As per claim 4, Hagen, Yamaguchi, and Brewer teach the server according to claim 2. Hagen teaches the server further comprising a memory for storing a table containing primary MAC addresses associated with said first terminals of said terminals, said first terminals exchange data frames encrypted in accordance with at least one format (Paragraph 0048, 0158-0159. MAC address in local database. Paragraph 0049. Encrypted communication.).

As per claim 5, Hagen, Yamaguchi, and Brewer teach the server according to claim 4. Hagen teaches wherein said table contains secondary MAC addresses associated with second terminals of said terminals, said second terminals exchange unencrypted data frames (Paragraphs 0048, 0050. MAC address in local database. Paragraph 0128, 0220. Unencrypted communication.).

As per claim 6, Hagen, Yamaguchi, and Brewer teach the server according to claim 5. Hagen teaches wherein: said control module determines whether an extracted MAC address, extracted from a received frame, is one of said primary or secondary MAC addresses and, if said determination is affirmative, said control module sends the allocation means a request to allocate a primary IP address to a terminal corresponding to said extracted MAC address, to allow said terminal corresponding to said extracted MAC address to set up a link with at least one first remote network and one second remote network and (Paragraphs 0048, 0158-0159. If MAC address is registered, provide IP address assignment. Access network with IP address.),

if said determination is negative, said control module sends the allocation means a request to allocate a secondary IP address to the terminal corresponding to said extracted MAC address, referred to as a third terminal, to allow said third terminal to set up a connection with at least one second remote network (Paragraphs 0052, 0107. If MAC address not registered, provide temporary IP address.).

As per claim 7, Hagen, Yamaguchi, and Brewer teach the server according to claim 6. Hagen teaches the server characterized in that said first terminals are associated with said at least one first remote network (Fig. 13; Paragraphs 0048, 0107. Clients of provider's private network.).

As per claim 8, Hagen, Yamaguchi, and Brewer teach the server according to claim 6. Hagen teaches characterized in that said second terminals belong to known users of said at least one first remote network (Fig. 13; Paragraphs 0048, 0107. Clients of network.).

As per claim 9, Hagen, Yamaguchi, and Brewer teach the server according to claim 6. Hagen teaches wherein: each first remote network is selected from a group comprising private networks, IP data networks, and public switched telephone networks (Fig. 13; Paragraphs 0048, 0107. Private network,

Internet.); and each second remote network is selected from a group comprising IP data networks and public switched telephone networks (Fig. 13; Paragraph 0107. Public access network, Internet, PSTN.).

As per claim 11, Hagen, Yamaguchi, and Brewer teach the server according to claim 1. Hagen further teaches wherein the primary MAC addresses and the secondary MAC addresses in said table are stored in corresponding relationship to at least one of said priority levels (Paragraph 0050. Allocate resources and assign QoS level based on MAC address. Paragraph 0107. Priority levels).

As per claim 12, Hagen, Yamaguchi, and Brewer teach the server according to claim 11. Hagen further teaches wherein said priority levels comprise: at least one first priority level allocated to said first terminals associated with primary MAC addresses; and one second priority level allocated to said second terminals associated with secondary MAC addresses (Paragraph 0050. Allocate resources and assign QoS level based on MAC address. Paragraph 0107. Priority levels.).

As per claim 13, Hagen, Yamaguchi, and Brewer teach the server according to claim 12. Hagen further teaches wherein said control module allocates a third priority level for allocation of resources of the local area network to said third terminal setting up communications not encrypted in accordance with said at least one format and whose MAC addresses are not in said table (Paragraph 0052. Terminal with address not located in database. Reduced communications. Paragraph 0107. Category of users and priority levels).

As per claim 14, Hagen, Yamaguchi, and Brewer teach the server according to claim 11. Hagen further teaches wherein said priority levels apply at least to a bandwidth, and said bandwidth decreases

from the first level to the third level (Paragraph 0050. Bandwidth based on assigned QOS. Paragraph 0107. Levels of priority and bandwidth.).

As per claim 17, Hagen, Yamaguchi, and Brewer teach the server according to claim 1. Hagen teaches said server is connected to said local area network by a cable connection (Paragraph 0056. Cable interface. Paragraph 0059. Connect to LAN.).

As per claim 21, Hagen, Yamaguchi, and Brewer teach a router, including a processing server according to claim 1 (Hagen: Paragraph 0054. NAS integrated with interface 14, i.e. router. Paragraphs 0066, 0185. NAS as router. Also see rejection claim 1).

As per claim 22, Hagen, Yamaguchi, and Brewer teach a local area network access point, including a processing server according to claim 1 (Hagen: Paragraph 0054. NAS implemented with WAP. Also see rejection claim 1).

As per claim 23, Hagen, Yamaguchi, and Brewer teach a communication installation comprising: at least one local area network accessible via at least one access point; at least one first remote network; at least one second remote network; and a processing server according to claim 1, which is connected to said access point and said first and second remote networks (Hagen: Figs. 1 and 13. LAN connected to WAP. NAS connected to WAP, Internet, PSTN. Also see rejection of claim 1).

As per claim 24, Hagen teaches the installation according to claim 23, wherein said local area network is a wireless local area network (Paragraphs 0042, 0045. Wireless LAN.).

As per claim 25, Hagen teaches the installation according to claim 23, wherein said processing server is connected to said first remote network via a virtual private network (Paragraphs 0070, 0146. Establish VPN between NAS and IODS. Paragraphs 0217-0218. IPSec between devices.).

As per claim 26, Hagen teaches the installation according to claim 23, wherein said processing server is connected to said first remote network via a remote access server (Paragraphs 0053, 0062. Connect to Internet. Paragraphs 0070, 0146. Connection between NAS and IODS.).

As per claim 27, Hagen teaches the installation according to claim 23, wherein: each said first remote network is chosen from a group comprising private networks, IP data networks, and public switched telephone networks ; and each said second remote network is selected from a group comprising IP data networks and public switched telephone networks (Fig. 13; Paragraphs 0048, 0107. Private network, Internet, PSTN).

As per claim 29, Hagen, Yamaguchi, and Brewer teach the method according to claim 28. Hagen further teaches the method comprising: in the event of an attempt by said terminal to set up a connection with said local area network, determining a MAC address of said terminal, and allocating an IP address to said terminal (Paragraph 0048. Lookup MAC address from packet. Paragraphs 0052, 0068. Allocate IP address.).

As per claim 30, Hagen, Yamaguchi, and Brewer teach the method according to claim 29. Hagen further teaches the method comprising: providing a table containing primary MAC addresses associated with first terminals of said terminals, said first terminals exchange data frames encrypted in accordance

with at least one format (Paragraph 0048, 0158-0159. MAC address in local database. Paragraph 0049. Encrypted communication.).

As per claim 31, Hagen, Yamaguchi, and Brewer teach the method according to claim 30. Hagen further teaches wherein said table contains secondary MAC addresses associated with second terminals of said terminals, said second terminals exchange unencrypted data frames (Paragraphs 0048, 0050. MAC address in local database. Paragraph 0128, 0220. Unencrypted communication.).

As per claim 32, Hagen, Yamaguchi, and Brewer teach the method according to claim 31. Hagen further teaches the method comprising: making a determination as to whether an extracted MAC address, extracted from a received frame, is one of said primary or secondary MAC addresses; and if said determination is affirmative, allocating a primary IP address to the terminal corresponding to said extracted MAC address to allow said terminal to set up a connection with at least one first remote network and one second remote network (Paragraphs 0048, 0158-0159. If MAC address is registered, provide IP address assignment. Access network with IP address); and if said determination is negative, allocating a secondary IP address to the terminal corresponding to said extracted MAC address, referred to as a third terminal, to allow said third terminal to set up a connection with a least one second remote network (Paragraphs 0052, 0107. If MAC address not registered, provide temporary IP address.).

As per claim 33, Hagen, Yamaguchi, and Brewer teach the method according to claim 32. Hagen further teaches wherein said first terminals are associated with said at least one first remote network (Fig. 13; Paragraph 0043. Provide access to public network using private networks. Paragraphs 0048, 0107. Clients of provider's private network. Paragraph 0052. Set of private/public networks.).

As per claim 34, Hagen, Yamaguchi, and Brewer teach the method according to claim 32. Hagen further teaches wherein said second terminals belong to known users of said at least one first remote network (Fig. 13; Paragraphs 0048, 0107. Clients of network. Paragraph 0052. Set of private/public networks.).

As per claim 35, Hagen, Yamaguchi, and Brewer teach the method according to claim 32. Hagen further teaches wherein: each first remote network is selected from a group comprising private networks, IP data networks, and public switched telephone networks (Fig. 13; Paragraphs 0048, 0107. Private network, Internet.); and each second remote network is selected from a group comprising IP data networks and public switched telephone networks (Fig. 13; Paragraph 0107. Public access network, Internet, PSTN.).

As per claim 37, Hagen, Yamaguchi, and Brewer teach the method according to claim 28. Hagen teaches wherein the primary MAC addresses and the secondary MAC address in said table are stored in corresponding relationship to at least one of said priority levels (Paragraph 0050. Profile corresponding to MAC address. Allocate resources and assign QoS level based on MAC address. Paragraph 0107. Priority levels.).

As per claim 38, Hagen, Yamaguchi, and Brewer teach the method according to claim 37. Hagen teaches wherein said priority levels comprise: at least one first priority level allocated to first terminals associated with primary MAC addresses; and at least one second priority level allocated to second terminals associated with secondary MAC addresses (Paragraph 0050. Allocate resources and assign QoS level based on MAC address. Paragraph 0107. Priority levels.).

As per claim 39, Hagen, Yamaguchi, and Brewer teach the method according to claim 38. Hagen teaches wherein a third priority level for allocation of resources of the local area network is allocated to said third terminal setting up communications that are not encrypted in accordance with said at least one format and whose MAC addresses are not in said table (Paragraph 0050. Profile corresponding to MAC address. Paragraph 0052. Terminal with address not located in database. Reduced communications. Paragraph 0107. Category of users and priority levels.).

As per claim 40, Hagen, Yamaguchi, and Brewer teach the method according to claim 36. Hagen teaches wherein said priority levels relate at least to a bandwidth, and said bandwidth decreases from the first level to the third level (Paragraph 0050. Bandwidth based on assigned QOS. Paragraph 0107. Levels of priority and bandwidth.).

As per claim 43, Hagen, Yamaguchi, and Brewer teach the method according to claim 28. Hagen further teaches wherein said local area network is selected from the group comprising PLMN, PABX private networks, and private communication gateways (Fig. 1 and 14; Paragraph 0043. Private networks.).

Claims 15, 18, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen, in view of Yamaguchi, Brewer, and Immonen et al. US Publication No. 2002/0132611 (Immonen hereinafter).

As per claim 15, Hagen does not specifically teach the server according to claim 14, wherein said control module sends said access point data representative of said bandwidth assigned to a designated terminal, and said access point allocates the corresponding resources to said designated terminal.

Immonen teaches of an access control that sends to an access point, data representative of bandwidth assigned to a designated terminal, and said access point allocates the corresponding resources to said designated terminal (Paragraphs 0046, 0048-0049).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for said control means to send said access point data representative of said bandwidth assigned to a designated terminal, and for said access point allocate the corresponding resources to said designated terminal. The motivation for the suggested combination is that Immonen's teachings would improve the suggested system by employing different levels of service according to the terminal.

As per claim 18, Hagen does not specifically teach the server according to claim 17, said cable connection being an Ethernet link.

Immonen teaches of a server configured to be connected to a local area network by an Ethernet link (Paragraph 0074).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for said cable connection to be an Ethernet link. The motivation for the suggested combination is that Immonen's teachings would improve the suggested system by using networking that is a commonly used, reliable, and compatible with most LANs.

As per claim 41, Hagen does not specifically teach the method according to claim 40, wherein said access point is sent data representative of said bandwidth assigned to a designated terminal, and said access point allocates the corresponding resources to said designated terminal.

Immonen teaches of sending data representative of bandwidth assigned to a designated terminal to an access point and allocating by said access point the corresponding resources to said designated terminal (Paragraphs 0046, 0048-0049).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to send said access point, data representative of said bandwidth assigned to a designated terminal, and for said access point to allocate the corresponding resources to said designated terminal. The motivation for the suggested combination is that Immonen's teachings would improve the suggested system by employing different levels of service according to the terminal.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen, in view of Yamaguchi, Brewer, and Sisodia et al. US Publication No. 2003/0165128 (Sisodia hereinafter).

As per claim 19, Hagen does not specifically teach the server according to claim 1, said server is connected to said local area network by a radio link.

Sisodia teaches of a server configured to be connected to a local area network by a radio link (Paragraphs 0029, 0045).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the server to be configured to be connected to said local area network by a radio link. The motivation for the suggested combination is that Sisodia's teachings would improve the suggested system by providing different communication facilities to link a server with access points.

As per claim 20, Hagen does not specifically teach the server according to claim 19, wherein said radio link is a 802.11b radio link.

Sisodia teaches of a server configured to be connected to a local area network by a 802.11b radio link radio link (Paragraphs 0029, 0045).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the server to be configured to be connected to said local area network by a 802.11b radio link radio link. The motivation for the suggested combination is that Sisodia's teachings would improve the suggested system by providing different communication facilities to link a server with access points.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen, in view of Yamaguchi, Brewer, and Bichot et al. US Publication No. 2003/0214929 (Bichot hereinafter).

As per claim 44, Hagen does not specifically teach the method according to claim 43, wherein the PLMN public networks are mobile networks selected from the group comprising GSM, GPRS, and UMTS networks.

Bichot teaches of implementing a GPRS based PLMN public network (Paragraph 0011, 0012).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to implement PLMN public network selected from the group comprising GSM, GPRS, and UMTS networks. The motivation for the suggested combination is that Bichot's teachings would improve the suggested system by utilizing a network that efficiently routes packets.

(10) Response to Argument

Appellant argued that:

(1) Regarding claim 1, while Brewer does discuss priority levels, Brewer only discusses priority levels with respect to bandwidths that are pre-allocated to specific QoS levels. Even if arguendo Brewer discuss adjusting bandwidth in the invention thereof, there is no teaching or reasonable suggestion of automatically modifying an allocated priority level as function of the available resources of said local area

network. A bandwidth is not a priority level. For reasons analogous to those submitted with respect to claim 1, claim 28 is also patentable. (Page 12 of the Appeal Brief)

In response, Brewer teaches (underlined for emphasis),

"receiving packets having payload pointers, packet data payloads, and packet lengths into a queuing structure comprising a plurality of queues; assigning said packets to separate queues in accordance with their quality of service (QOS) priority levels; storing said packet payload pointers in said queues; storing said packet payloads in a common memory pool shared by all of said plurality of queues; and releasing said packets from said queues into a common egress tributary using a rate metering mechanism." (Claim 11)

"Again the algorithm indexes from the highest priority QOS level 0 to lowest priority QOS level 3. The same algorithm could be applied to any number of QOS levels." (col. 5, lines 14-17)

"A certain bandwidth is pre-allocated to each of the four QOS levels that exist in egress queuing structure 10. An arbitration algorithm controls the flow of data from each QOS level QOS-0 through QOS-3, such that each QOS level receives its fair share of the bandwidth going out of the egress port." (col. 4, lines 17-22)

"In FIG. 2B, curve 204 for QOS 1 queue 14-1 starts at a threshold of 20% under an assumption that the QOS level 1 is allotted twice as much bandwidth as is QOS level 0. Similarly QOS levels 2 and 3 are allotted 30% and 40% respectively, as illustrated in FIGS. 2C and 2D." (col. 5, lines 39-43)

Brewer teaches of QOS levels with varying priorities and allocating a QOS level to packets. Each of the QOS levels is allocated with a certain amount of bandwidth, the amount of bandwidth depending on the priority of the QOS levels. As described above, QOS level 1 is allotted twice the amount of bandwidth as QOS level 0.

Brewer further teaches,

"FIGS. 3A 3D are graphic representations showing how the drop probabilities are modified when the total of the four QOS levels now consume only 80% of the common memory space. The 20% excess bandwidth can then be used by any QOS level that needs it. In FIGS. 3A 3D, it is shown that 20% overall excess bandwidth capacity is added to each of QOS levels 0, 1, 2, and 3 illustrated respectively in FIGS. 3A, 3B, 3C and 3D." (col. 5, lines 60-67)

"The 20% excess available bandwidth is given simultaneously to each of the four QOS levels, such that QOS level 0, instead of being 10% is now 30%, QOS 1 in FIG. 3B, instead of being 20% is 40%, QOS 2 in FIG. 3C instead of being 30% is 50%, and QOS 3 in FIG. 3D instead of being 40% is now 60%. Thus, any of the four QOS levels could consume 20% more than its

> allocated memory space, which is acceptable because the common memory pool is only 80% full." (col. 6, lines 4-12)

Brewer teaches of adding excess bandwidth to allocated QOS levels when the allocated QOS levels do not consume all bandwidth. An allocated QOS level is associated with the pre-allocated bandwidth plus the excess bandwidth, thus the allocated QOS level is modified with more bandwidth than the allocated QOS level should provide at the priority. For instance, an assigned QOS level at priority 0 should provide 10% bandwidth, but the QOS level at priority 0 receives an additional 20% for a total allocation of 30% bandwidth. For packets assigned with QOS level 0, the packets may receive 30% bandwidth rather than receiving the 10% bandwidth at the level 0. By adding the additional bandwidth to the assigned QOS level, the assigned QOS level that should provide only the pre-allocated bandwidth at the level is modified with the additional bandwidth. Therefore, Brewer teaches of modifying an allocated priority level as function of the available resources of a network.

Regarding automatically modifying the allocated priority level, the modifying the allocated priority level as taught by Brewer is considered as automatic modifying as Brewer teaches that software can be used to configure how much bandwidth is to be used by each of the QOS level (col. 5, lines 44-51) and the modifying is performed by a router, i.e. in a machine (col. 2, lines 21-29). Additionally, if Appellant is suggesting that the modifying in Brewer is performed manually, it is also noted that "The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.). MPEP 2144.04(III)

Lastly, as shown above, Brewer teaches of modifying the automatically modifying an allocated priority level as function of the available resources of in a network but not specifically in a local area network. However, Hagen US Publication No. 2002/0075844 was used to teach allocating resources in a local area network. Hagen teaches,

> "the NAS performs registration, authentication, and other functions necessary to provide visiting mobile terminals with access to the public network 16, while simultaneously controlling access by such visitors to the local private network 10, whose public network connection resources are

being used to provide such access. The NAS 7 also preferably provides such services as bandwidth allocation management, quality of service management…) (Paragraph 0043)

"a stored subscriber profile corresponding to the owner of the MAC address is retrieved, cached in the NAS' local database, and processed by the NAS to determine the network access and bandwidth parameters for which the subscriber is authorized, the subscriber's assigned quality of service (QOS) level…" (Paragraph 0050)

"In addition to confirming the mobile terminal is authorized and allocating network resources to it, the NAS preferably provides additional services. For example, it preferably ensures that any communications between private LAN 10 and mobile terminal 1 are suitably encrypted." (Paragraph 0051)

Therefore, Hagen, in view of Yamaguchi and Brewer teach claim 1 including the limitation of "automatically modifying an allocated priority level as function of the available resources of said local area network".

Appellant has not provided any new or persuasive arguments for the patentability of claim 28. Therefore, Examiner incorporates the above response for the rejection of claim 1, and claim 28 is not patentable for the reasons that claim 1 is not patentable.

(2) Claims 2-9, 11-15, 17-27, 29-35, 37-41, 43, and 44 which depend from claims 1 or 28, are patentable at least by virtue of their dependencies.

In response, Appellant has not presented any new or persuasive arguments for the patentability of claims 1, 28, or the dependent claims. Appellant merely states that the references applied to the dependent claims do not make up for the deficiencies of Hagen, Yamaguchi, and Brewer. Therefore, the rejection of the claims 2-9, 11-15, 17-27, 29-35, 37-41, 43, and 44 are maintained, and claims 1 and 28 are not patentable for reasons provided above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Joshua Joo/
Primary Examiner, Art Unit 2445

Conferees:

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